

## CLAIMS:

1. An array (20) of magnetoresistive memory elements (10) comprising:
  - a magnetic field sensor unit (40) for measuring an external magnetic field in the vicinity of the magnetoresistive memory elements (10), and
  - means (42) for temporarily disabling any programming operation when the measured external magnetic field exceeds a threshold value.
2. An array (20) according to claim 1, wherein the magnetic field sensor unit comprises a plurality of magnetic field sensors (40).
- 10 3. An array (20) according to claim 1, wherein the magnetic field sensor unit (40) is adapted to generate an output signal (41) representative of the external magnetic field measured.
4. An array (20) according to claim 1, wherein the magnetic field sensor unit (40) 15 is an analog sensor unit.
5. An array (20) according to claim 1, wherein the magnetic field sensor unit (40) is an element of the same construction as the magnetoresistive memory elements (10).
- 20 6. An array (20) according to claim 5, wherein the magnetic field sensor unit (40) is more sensitive to magnetic fields than the magnetoresistive memory elements (10).
7. An array (20) according to claim 1, furthermore comprising driving circuitry (43) for driving the memory elements (10) of the array (20).
- 25 8. An array (20) according to claim 1, furthermore comprising a temperature measurement unit for measuring temperature in the vicinity of the magnetoresistive memory elements (10), wherein the means (42) for temporarily disabling any programming operation

are adapted to disable any programming operation when the measured temperature exceeds a pre-set temperature range.

9. An electronic device comprising an array (20) according to claim 1.

5

10. Method for preventing erroneous programming of a magnetoresistive memory element (10) during the presence of an external magnetic field, the method comprising:

- measuring the external magnetic field in the vicinity of the magnetic memory element (10), and

10 - temporarily disabling any programming operation if the measured external magnetic field exceeds a threshold value.

11. Method according to claim 10, furthermore comprising sensing temperature in the neighborhood of the magnetoresistive memory element and temporarily disabling any

15 programming operation if the measured temperature exceeds a pre-set temperature range.